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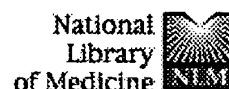
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 PMID: 11287005 [PubMed - indexed for MEDLINE]

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Grb10, a positive, stimulatory signaling adapter in platelet-derived growth factor BB-, insulin-like growth factor I-, and insulin-mediated mitogenesis.
 Mol Cell Biol. 1999 Sep;19(9):6217-28.
 PMID: 10454568 [PubMed - indexed for MEDLINE]

☐ **4:** [He W, Rose DW, Olefsky JM, Gustafson TA](#) [Related Articles, Links](#)

Grb10 interacts differentially with the insulin receptor, insulin-like growth factor I receptor, and epidermal growth factor receptor via the Grb10 Src homology 2 (SH2) domain and a second novel domain located between the pleckstrin homology and SH2 domains.
 J Biol Chem. 1998 Mar 20;273(12):6860-7.
 PMID: 9506989 [PubMed - indexed for MEDLINE]

☐ **5:** [LeRoith D, McGuinness M, Shemer J, Stannard B, Lanau F, Faria TN, Kato H, Werner H, Adamo M, Roberts CT Jr](#) [Related Articles, Links](#)

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





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Characterization of the promoter region and 3' end of the human insulin receptor gene.
 J Biol Chem. 1989 Sep 25;264(27):16238-45.
 PMID: 2777789 [PubMed - indexed for MEDLINE]

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-  Insulin-like growth factor-binding proteins (IGF-BPs) produced by human skin fibroblasts: immunological relationship to other human IGF-BPs. *Endocrinology*. 1988 Oct;123(4):1907-15. PMID: 2970958 [PubMed - indexed for MEDLINE]
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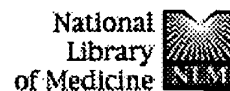
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Grb7, Grb10 and Grb14 comprise a family of adaptor proteins that interact with numerous receptor tyrosine kinases upon receptor activation. Between the pleckstrin homology (PH) domain and the Src homology 2 (SH2) domain of these proteins is a region of approximately 50 residues known as the BPS (between PH and SH2) domain. Here we show, using purified recombinant proteins, that the BPS domain of Grb10 directly inhibits substrate phosphorylation by the activated tyrosine kinase domains of the insulin receptor and the insulin-like growth factor 1 (IGF1) receptor. Although inhibition by the BPS domain is dependent on tyrosine phosphorylation of the kinase activation loop, peptide competition experiments indicate that the BPS domain does not bind directly to phosphotyrosine. These studies provide a molecular mechanism by which Grb10 functions as a negative regulator of insulin- and/or IGF1-mediated signaling.

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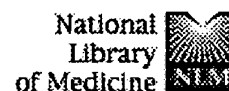
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








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






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 Blood. 2002 Nov 1;100(9):3295-303.
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 Cancer Res. 2002 Sep 1;62(17):4884-9.
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 PMID: 12110298 [PubMed - indexed for MEDLINE]
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J Steroid Biochem Mol Biol. 2001 Dec;79(1-5):115-25. Review.
PMID: 11850215 [PubMed - indexed for MEDLINE]
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J Allergy Clin Immunol. 2002 Jan;109(1):155-61.
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CD8+ T cells in cutaneous T-cell lymphoma: expression of cytotoxic proteins, Fas Ligand, and killing inhibitory receptors and their relationship with clinical behavior.
J Clin Oncol. 2001 Dec 1;19(23):4322-9.
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Transplantation. 2001 Oct 27;72(8):1385-8.
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Clin Cancer Res. 2001 Oct;7(10):3276-81.
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Alcohol Clin Exp Res. 2001 Jul;25(7):1058-64.
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Association of insulin receptor substrate 1 (IRS-1) y895 with Grb-2 mediates the insulin signaling involved in IRS-1-deficient brown adipocyte mitogenesis.
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Hum Mol Genet. 2001 Mar 15;10(6):605-16.
PMID: 11230180 [PubMed - indexed for MEDLINE]
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Collagen fibers and inflammatory cells in healthy and diseased human gingival tissues: a comparative and quantitative study by immunohistochemistry and automated image analysis.
J Periodontol. 2000 Jul;71(7):1079-85.
PMID: 10960013 [PubMed - indexed for MEDLINE]
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PMID: 10887228 [PubMed - indexed for MEDLINE]
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Astrophys J. 2000 May 10;534(2):L147-L150.
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


















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




































Perforin-dependent nuclear entry of granzyme B precedes apoptosis, and is not a consequence of nuclear membrane dysfunction.

Cell Death Differ. 1998 Jun;5(6):488-96.

PMID: 10200500 [PubMed - indexed for MEDLINE]

-  **35:** [Salerno M, Sisci D, Mauro L, Guvakova MA, Ando S, Surmacz E.](#) [Related Articles, Links](#)
 **Insulin receptor substrate 1 is a target for the pure antiestrogen ICI 182,780 in breast cancer cells.**
Int J Cancer. 1999 Apr 12;81(2):299-304.
PMID: 10188734 [PubMed - indexed for MEDLINE]
-  **36:** [Jans DA, Sutton VR, Jans P, Froelich CJ, Trapani JA.](#) [Related Articles, Links](#)
 **BCL-2 blocks perforin-induced nuclear translocation of granzymes concomitant with protection against the nuclear events of apoptosis.**
J Biol Chem. 1999 Feb 12;274(7):3953-61.
PMID: 9933585 [PubMed - indexed for MEDLINE]
-  **37:** [Yang X, Stennicke HR, Wang B, Green DR, Janicke RU, Srinivasan A, Seth P, Salvesen GS, Froelich CJ.](#) [Related Articles, Links](#)
 **Granzyme B mimics apical caspases. Description of a unified pathway for trans-activation of executioner caspase-3 and -7.**
J Biol Chem. 1998 Dec 18;273(51):34278-83.
PMID: 9852092 [PubMed - indexed for MEDLINE]
-  **38:** [Ghosh P, Kumar S, Pandey S, Kumar AS, Sinha N.](#) [Related Articles, Links](#)
 **Small aortic annulus: a functional definition.**
Ann Thorac Cardiovasc Surg. 1998 Oct;4(5):251-61.
PMID: 9828282 [PubMed - indexed for MEDLINE]
-  **39:** [Tanaka S, Mori M, Akiyoshi T, Tanaka Y, Mafune K, Wands JR, Sugimachi K.](#) [Related Articles, Links](#)
 **A novel variant of human Grb7 is associated with invasive esophageal carcinoma.**
J Clin Invest. 1998 Aug 15;102(4):821-7.
PMID: 9710451 [PubMed - indexed for MEDLINE]
-  **40:** [Weber JR, Orstavik S, Torgersen KM, Danbolt NC, Berg SE, Ryan JC, Tasken K, Imboden JB, Vaage JT.](#) [Related Articles, Links](#)
 **Molecular cloning of the cDNA encoding pp36, a tyrosine-phosphorylated adaptor protein selectively expressed by T cells and natural killer cells.**
J Exp Med. 1998 Apr 6;187(7):1157-61.
PMID: 9529333 [PubMed - indexed for MEDLINE]
-  **41:** [Patti ME, Brambilla E, Luzi L, Landaker EJ, Kahn CR.](#) [Related Articles, Links](#)
 **Bidirectional modulation of insulin action by amino acids.**
J Clin Invest. 1998 Apr 1;101(7):1519-29.
PMID: 9525995 [PubMed - indexed for MEDLINE]
-  **42:** [Fiddes RJ, Campbell DH, Janes PW, Sivertsen SP, Sasaki H, Wallasch C, Daly RJ.](#) [Related Articles, Links](#)
 **Analysis of Grb7 recruitment by heregulin-activated erbB receptors reveals a novel target selectivity for erbB3.**
J Biol Chem. 1998 Mar 27;273(13):7717-24.
PMID: 9516479 [PubMed - indexed for MEDLINE]
-  **43:** [Spaeny-Dekking EH, Hanna WL, Wolbink AM, Wever PC, Kummer AJ, Swaak AJ, Middeldorp JM, Huisman HG, Froelich CJ, Hack CE.](#) [Related Articles, Links](#)
 **Extracellular granzymes A and B in humans: detection of native species during CTL responses in vitro and in vivo.**
J Immunol. 1998 Apr 1;160(7):3610-6.
PMID: 9531325 [PubMed - indexed for MEDLINE]
-  **44:** [Cho MS, Lee MK, Yang WI, Yoon JH.](#) [Related Articles, Links](#)

-  Granzyme B immunoreactivity in T/natural killer cell lymphomas.
Yonsei Med J. 1997 Oct;38(5):285-93.
PMID: 9409191 [PubMed - indexed for MEDLINE]
-  **45:** [Dong LQ, Du H, Porter SG, Kolakowski LF Jr, Lee AV, Mandarin L, Fan J, Yee D, Liu F, Mandarin J.](#) [Related Articles, Links](#)
[Mandarin L, Fan J, Yee D, Liu F, Mandarin J.](#)
-  Cloning, chromosome localization, expression, and characterization of an Src homology 2 and pleckstrin homology domain-containing insulin receptor binding protein hGrb10gamma.
J Biol Chem. 1997 Nov 14;272(46):29104-12.
PMID: 9360986 [PubMed - indexed for MEDLINE]
-  **46:** [Uddin S, Fish EN, Sher D, Gardziola C, Colamonici OR, Kellum M, Pitha PM, White MF, Platanias LC.](#) [Related Articles, Links](#)
-  The IRS-pathway operates distinctively from the Stat-pathway in hematopoietic cells and transduces common and distinct signals during engagement of the insulin or interferon-alpha receptors.
Blood. 1997 Oct 1;90(7):2574-82.
PMID: 9326223 [PubMed - indexed for MEDLINE]
-  **47:** [Talanian RV, Yang X, Turbov J, Seth P, Ghayur T, Casiano CA, Orth K, Froelich CJ.](#) [Related Articles, Links](#)
-  Granule-mediated killing: pathways for granzyme B-initiated apoptosis.
J Exp Med. 1997 Oct 20;186(8):1323-31.
PMID: 9334372 [PubMed - indexed for MEDLINE]
-  **48:** [Lavan BE, Fantin VR, Chang ET, Lane WS, Keller SR, Lienhard GE.](#) [Related Articles, Links](#)
-  A novel 160-kDa phosphotyrosine protein in insulin-treated embryonic kidney cells is a new member of the insulin receptor substrate family.
J Biol Chem. 1997 Aug 22;272(34):21403-7.
PMID: 9261155 [PubMed - indexed for MEDLINE]
-  **49:** [Akiyama N, Sasaki H, Ishizuka T, Kishi T, Sakamoto H, Onda M, Hirai H, Yazaki Y, Sugimura T, Terada M.](#) [Related Articles, Links](#)
-  Isolation of a candidate gene, CAB1, for cholesterol transport to mitochondria from the c-ERBB-2 amplicon by a modified cDNA selection method.
Cancer Res. 1997 Aug 15;57(16):3548-53.
PMID: 9270027 [PubMed - indexed for MEDLINE]
-  **50:** [Kishi T, Sasaki H, Akiyama N, Ishizuka T, Sakamoto H, Aizawa S, Sugimura T, Terada M.](#) [Related Articles, Links](#)
-  Molecular cloning of human GRB-7 co-amplified with CAB1 and c-ERBB-2 in primary gastric cancer.
Biochem Biophys Res Commun. 1997 Mar 6;232(1):5-9.
PMID: 9125150 [PubMed - indexed for MEDLINE]
-  **51:** [Frantz JD, Giorgetti-Peraldi S, Ottinger EA, Shoelson SE.](#) [Related Articles, Links](#)
-  Human GRB-IRbeta/GRB10. Splice variants of an insulin and growth factor receptor-binding protein with PH and SH2 domains.
J Biol Chem. 1997 Jan 31;272(5):2659-67.
PMID: 9006901 [PubMed - indexed for MEDLINE]
-  **52:** [Wolfson M, Yang CP, Horwitz SB.](#) [Related Articles, Links](#)
-  Taxol induces tyrosine phosphorylation of Shc and its association with Grb2 in murine RAW 264.7 cells.
Int J Cancer. 1997 Jan 17;70(2):248-52.
PMID: 9009167 [PubMed - indexed for MEDLINE]

-  **53:** [Pandey A, Liu X, Dixon JE, Di Fiore PP, Dixit VM.](#) [Related Articles](#), [Links](#)
 Direct association between the Ret receptor tyrosine kinase and the Src homology 2-containing adapter protein Grb7.
J Biol Chem. 1996 May 3;271(18):10607-10.
PMID: 8631863 [PubMed - indexed for MEDLINE]
-  **54:** [Oberhuber G, Vogelsang H, Stolte M, Muthenthaler S, Kummer AJ, Radaszkiewicz T.](#) [Related Articles](#), [Links](#)
 Evidence that intestinal intraepithelial lymphocytes are activated cytotoxic T cells in celiac disease but not in giardiasis.
Am J Pathol. 1996 May;148(5):1351-7.
PMID: 8623906 [PubMed - indexed for MEDLINE]
-  **55:** [Hobert O, Schilling JW, Beckerle MC, Ullrich A, Jallat B.](#) [Related Articles](#), [Links](#)
 SH3 domain-dependent interaction of the proto-oncogene product Vav with the focal contact protein zyxin.
Oncogene. 1996 Apr 4;12(7):1577-81.
PMID: 8622875 [PubMed - indexed for MEDLINE]
-  **56:** [Wang YS, Frederick AF, Senior MM, Lyons BA, Black S, Kirschmeier P, Perkins LM, Wilson O.](#) [Related Articles](#), [Links](#)
 Chemical shift assignments and secondary structure of the Grb2 SH2 domain by heteronuclear NMR spectroscopy.
J Biomol NMR. 1996 Mar;7(2):89-98.
PMID: 8616273 [PubMed - indexed for MEDLINE]
-  **57:** [Clark JW, Santos-Moore A, Stevenson LE, Frackelton AR Jr.](#) [Related Articles](#), [Links](#)
 Effects of tyrosine kinase inhibitors on the proliferation of human breast cancer cell lines and proteins important in the ras signaling pathway.
Int J Cancer. 1996 Jan 17;65(2):186-91.
PMID: 8567115 [PubMed - indexed for MEDLINE]
-  **58:** [Lorenz MW, Kellner R, Hoffmann KH.](#) [Related Articles](#), [Links](#)
 A family of neuropeptides that inhibit juvenile hormone biosynthesis in the cricket, *Gryllus bimaculatus*.
J Biol Chem. 1995 Sep 8;270(36):21103-8.
PMID: 7673141 [PubMed - indexed for MEDLINE]
-  **59:** [Ren R, Ye ZS, Baltimore D.](#) [Related Articles](#), [Links](#)
 Abl protein-tyrosine kinase selects the Crk adapter as a substrate using SH3-binding sites.
Genes Dev. 1994 Apr 1;8(7):783-95.
PMID: 7926767 [PubMed - indexed for MEDLINE]
-  **60:** [Stein D, Wu J, Fuqua SA, Roonprapunt C, Yajnik V, D'Eustachio P, Moskow JJ, Buchberg AM, Osborne CK, Margolis B.](#) [Related Articles](#), [Links](#)
 The SH2 domain protein GRB-7 is co-amplified, overexpressed and in a tight complex with HER2 in breast cancer.
EMBO J. 1994 Mar 15;13(6):1331-40.
PMID: 7907978 [PubMed - indexed for MEDLINE]
-  **61:** [Schlatter E, Bleich M, Hirsch J, Markstahler U, Frobe U, Greger R.](#) [Related Articles](#), [Links](#)
 Cation specificity and pharmacological properties of the Ca(2+)-dependent K⁺ channel of rat cortical collecting ducts.
Pflugers Arch. 1993 Feb;422(5):481-91.
PMID: 7682688 [PubMed - indexed for MEDLINE]
-  **62:** [Margolis B, Silvennoinen O, Comoglio F, Roonprapunt C, Skolnik E, Ullrich A, Schlessinger J.](#) [Related Articles](#), [Links](#)



High-efficiency expression/cloning of epidermal growth factor-receptor-binding proteins with Src homology 2 domains.

Proc Natl Acad Sci U S A. 1992 Oct 1;89(19):8894-8.
PMID: 1409582 [PubMed - indexed for MEDLINE]



63: [Kirsch GE, Drewe JA, Tagliatela M, Joho RH, DeBiasi M, Hartmann HA, Brown AM.](#)

[Related Articles, Links](#)



A single nonpolar residue in the deep pore of related K⁺ channels acts as a K⁺:Rb⁺ conductance switch.

Biophys J. 1992 Apr;62(1):136-43; discussion 143-4.
PMID: 1600093 [PubMed - indexed for MEDLINE]



64: [Lanyi JK, Tittor J, Varo G, Krippahl G, Oesterhelt D.](#)

[Related Articles, Links](#)



Influence of the size and protonation state of acidic residue 85 on the absorption spectrum and photoreaction of the bacteriorhodopsin chromophore.

Biochim Biophys Acta. 1992 Jan 30;1099(1):102-10.
PMID: 1346749 [PubMed - indexed for MEDLINE]



65: [Pavenstadt H, Lindeman S, Lindeman V, Spath M, Kunzelmann K, Greger R.](#)

[Related Articles, Links](#)



Potassium conductance of smooth muscle cells from rabbit aorta in primary culture.

Pflugers Arch. 1991 Aug;419(1):57-68.
PMID: 1945762 [PubMed - indexed for MEDLINE]



66: [Sioud M, Baldacci G, de Recondo AM, Forterre P.](#)

[Related Articles, Links](#)



Novobiocin induces positive supercoiling of small plasmids from halophilic archaeobacteria in vivo.

Nucleic Acids Res. 1988 Feb 25;16(4):1379-91.
PMID: 3347494 [PubMed - indexed for MEDLINE]



67: [Sioud M, Possot O, Elie C, Sibold L, Forterre P.](#)

[Related Articles, Links](#)



Coumarin and quinolone action in archaeobacteria: evidence for the presence of a DNA gyrase-like enzyme.

J Bacteriol. 1988 Feb;170(2):946-53.
PMID: 2828337 [PubMed - indexed for MEDLINE]



68: [Sioud M, Forterre P, de Recondo AM.](#)

[Related Articles, Links](#)



Effects of the antitumor drug VP16 (etoposide) on the archaeobacterial Halobacterium GRB 1.7 kb plasmid in vivo.

Nucleic Acids Res. 1987 Oct 26;15(20):8217-34.
PMID: 3671082 [PubMed - indexed for MEDLINE]



69: [Uchida S, Green N, Coon H, Triche T, Mims S, Burg M.](#)

[Related Articles, Links](#)



High NaCl induces stable changes in phenotype and karyotype of renal cells in culture.

Am J Physiol. 1987 Aug;253(2 Pt 1):C230-42.
PMID: 3303963 [PubMed - indexed for MEDLINE]



70: [Yagil C, Michaeli Y, Zajicek G.](#)

[Related Articles, Links](#)



Compensatory proliferative response of the rat submandibular salivary gland to unilateral extirpation.

Virchows Arch B Cell Pathol Incl Mol Pathol. 1985;49(1):83-91.
PMID: 2862738 [PubMed - indexed for MEDLINE]

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